

Title (en)  
VARIABLE MECHANISM FOR TURBO CHARGER OF VGS TYPE AND EXHAUST GUIDE ASSEMBLY HAVING THE SAME THEREIN

Title (de)  
VARIABLE MECHANISMUS FÜR EINEN VGS-TURBOLADER UND ABGASLEITUNGSANORDNUNG DAMIT

Title (fr)  
MÉCANISME VARIABLE POUR TURBOCOMPRESSEUR DE TYPE VGS ET ENSEMBLE DE GUIDAGE D'ÉCHAPPEMENT AYANT CELUI-CI

Publication  
**EP 2154349 A4 20130703 (EN)**

Application  
**EP 08765188 A 20080605**

Priority  
• JP 2008060375 W 20080605  
• JP 2007151854 A 20070607

Abstract (en)  
[origin: EP2154349A1] A novel technique for partially improving wear resistance of an input portion of a drive ring, where power of a shifting drive is input from an external actuator, in an adjustment mechanism incorporated in a VGS type turbocharger for concurrently rotating adjustable blades, without specifically attaching a separate member afterwards is provided. The present invention is characterized in that the drive ring, to which shaft portions of the adjustable blades are connected, is made of a blank material punched out from a metal material having a substantially constant thickness, a blank being cut out such that the blank includes a surplus reinforcing portion in addition to an actual product part of the drive ring, the reinforcing portion being suitably folded back so as to partially increase the thickness of the input portion, where power of the shifting drive is input from the actuator, thereby increasing wear resistance of the input portion, and in addition characterized in that the material type/sheet thickness/shape factor are specified for implementation of the invention.

IPC 8 full level  
**F02B 37/24** (2006.01); **F01D 17/16** (2006.01); **F02B 39/00** (2006.01)

CPC (source: EP KR US)  
**F01D 17/16** (2013.01 - KR); **F01D 17/165** (2013.01 - EP US); **F02B 37/24** (2013.01 - KR); **F02B 39/00** (2013.01 - KR); **F02C 6/12** (2013.01 - EP US); **F02B 37/24** (2013.01 - EP US); **F05D 2220/40** (2013.01 - EP US)

Citation (search report)  
• [A] US 6471470 B2 20021029 - YOSHIMURA HYOSHI [JP], et al  
• [A] EP 1722073 A1 20061115 - BORGWARNER INC [US]  
• See references of WO 2008149938A1

Cited by  
CN102454624A

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 2154349 A1 20100217**; **EP 2154349 A4 20130703**; **EP 2154349 B1 20141001**; CN 101663471 A 20100303; CN 101663471 B 20120905; JP 2008303790 A 20081218; JP 4098821 B1 20080611; KR 101414842 B1 20140703; KR 20100021402 A 20100224; US 2010077748 A1 20100401; US 8480356 B2 20130709; WO 2008149938 A1 20081211

DOCDB simple family (application)  
**EP 08765188 A 20080605**; CN 200880012702 A 20080605; JP 2007151854 A 20070607; JP 2008060375 W 20080605; KR 20097021788 A 20080605; US 45061108 A 20080605